Poughkeepsie 9.44.55

Rethinking the Arterials & Interchange

Committee Meeting #7 - Arterials

February 24, 2021

Dutchess County Transportation Council

FITZGERALD & HALLIDAY, INC.
Innovative Planning, Better Communities

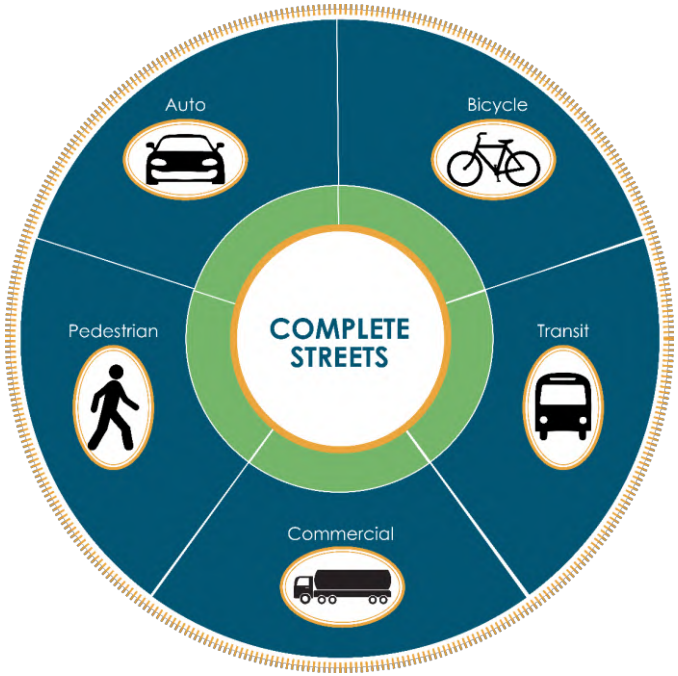
Creighton Manning

Meeting Purpose

- Provide update on Arterials assessment
- Obtain Committee Input
  - Do you agree with the assessment to date?
  - Additional analysis or concepts before going to the public?

Agenda

- Arterials Status
  - Background
  - Alternatives
  - Traffic Operations
    - Travel times
    - Simulations
  - COVID travel data
  - Trade-offs
- Schedule



Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange

Why

…maximize safety, livability, and connectivity, while delivering acceptable traffic operations

Crash rates are above average

Speeds are about 10 MPH over the speed limit

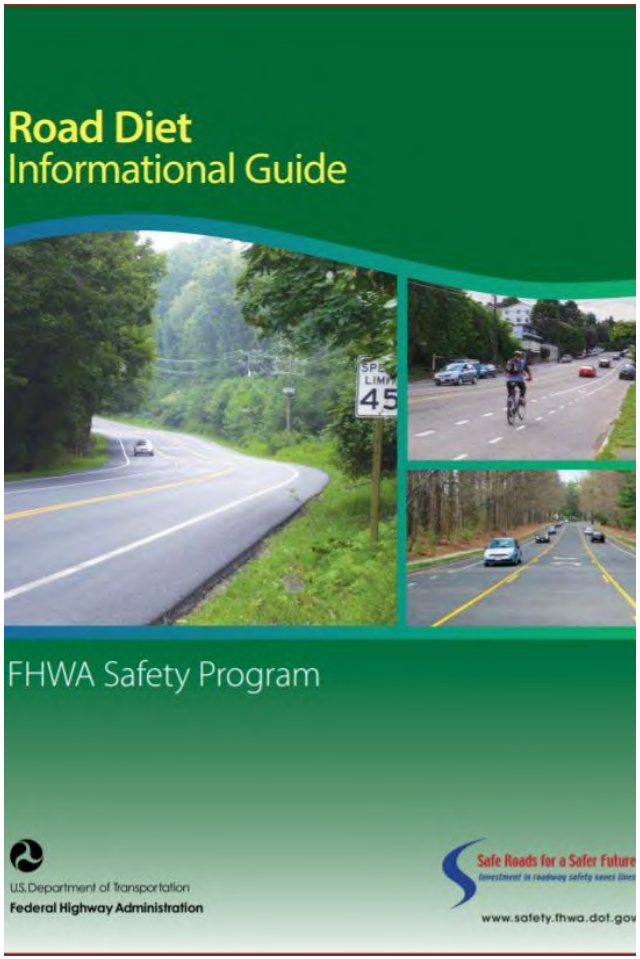
Demographics analysis shows 40% to 65% of households rely on other modes

The Arterials separate residential areas from commercial areas

Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange

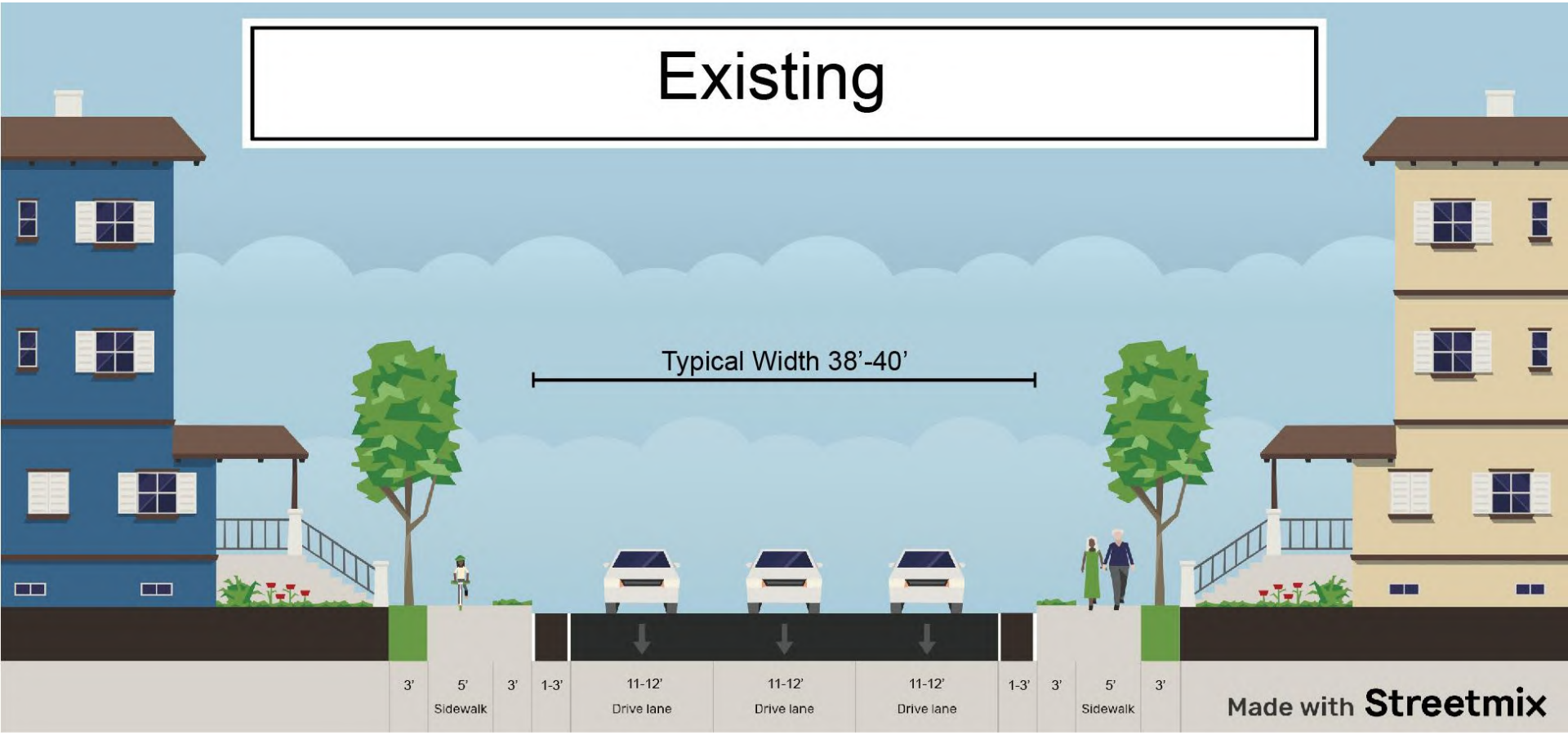
FHWA Road Diet Informational Guide

- reduce range of speeds
- reduce the number of vehicles speeding excessively
- likely to decrease by 3 to 5 mph.
- 7 percent reduction in vehicles traveling over the posted speed limit.

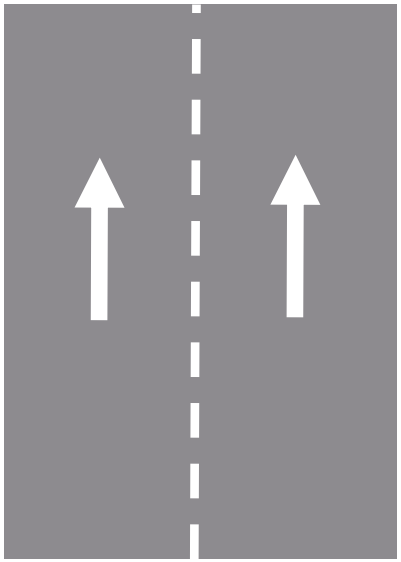


Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange

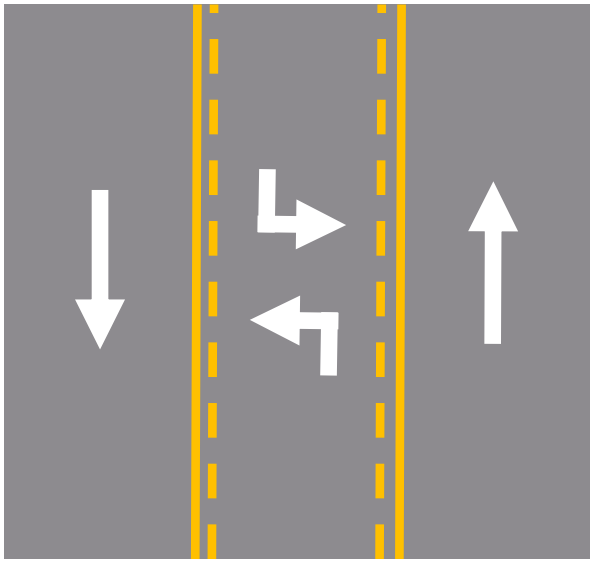
Alternatives


Existing
Typical Width 38’-40’
3’
5’
Sidewalk
3’
1-3’
11-12’
Drive lane
11-12’
Drive lane
11-12’
Drive lane
1-3’
3’
5’
Sidewalk
3’
Made with Streetmix

Basic Concepts

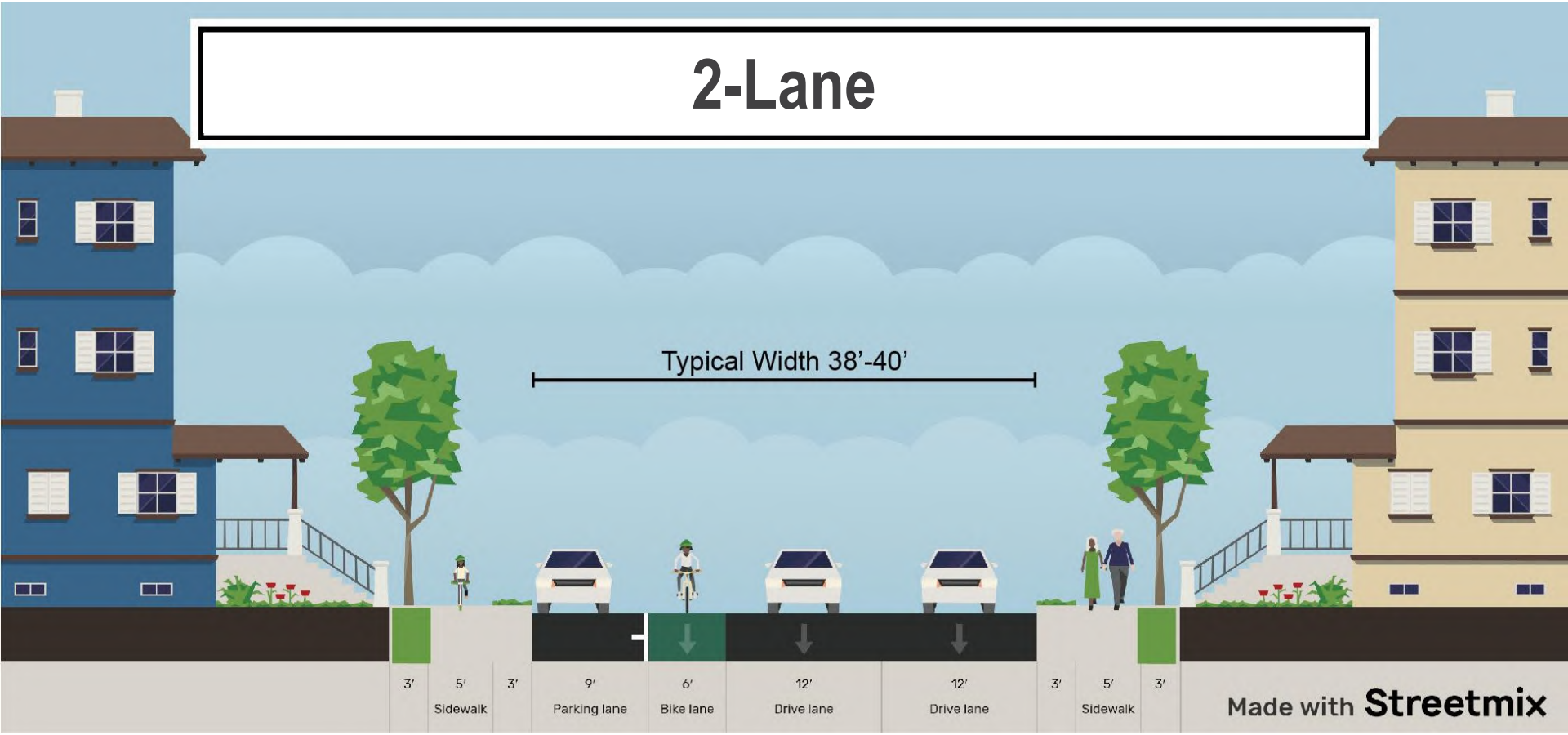


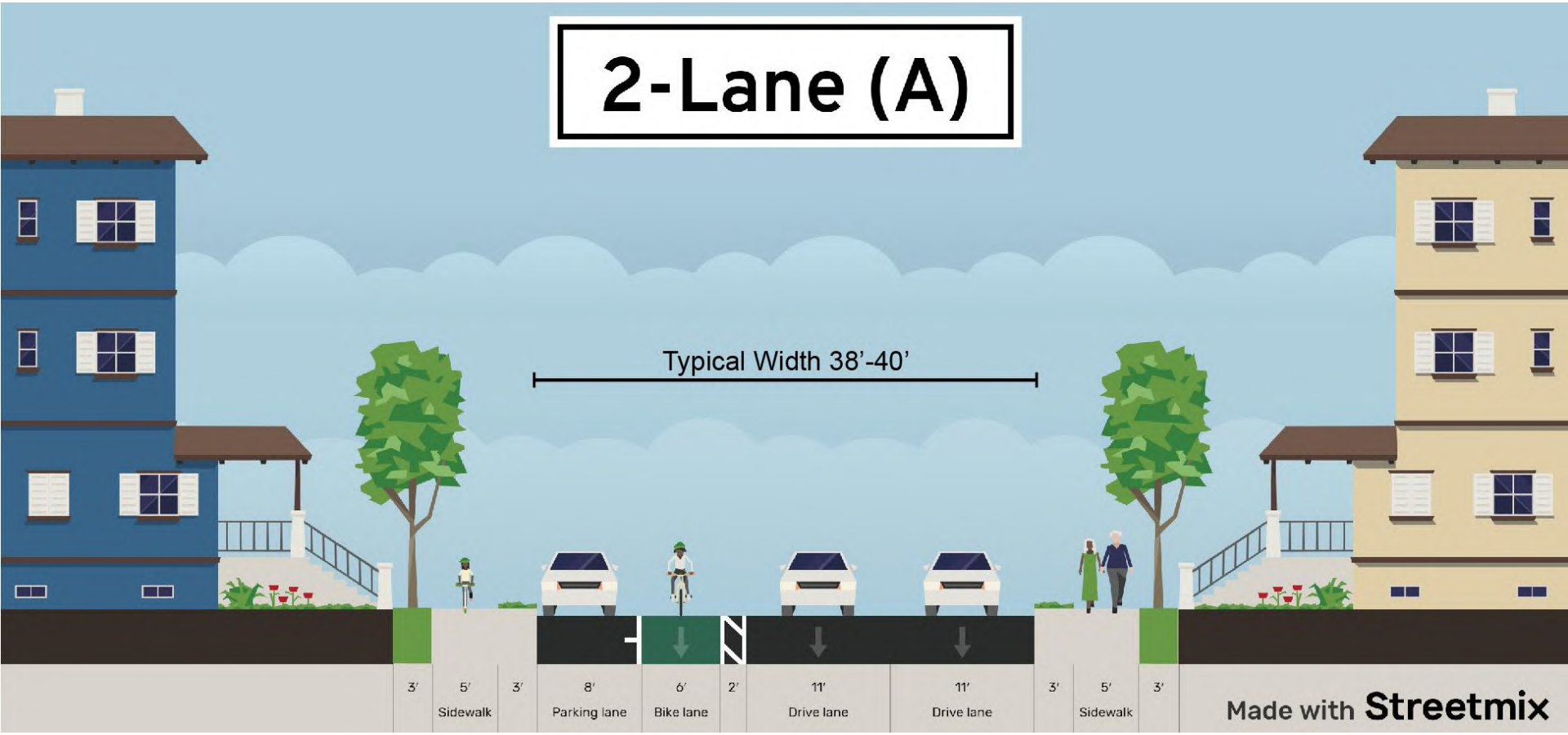
2 lanes

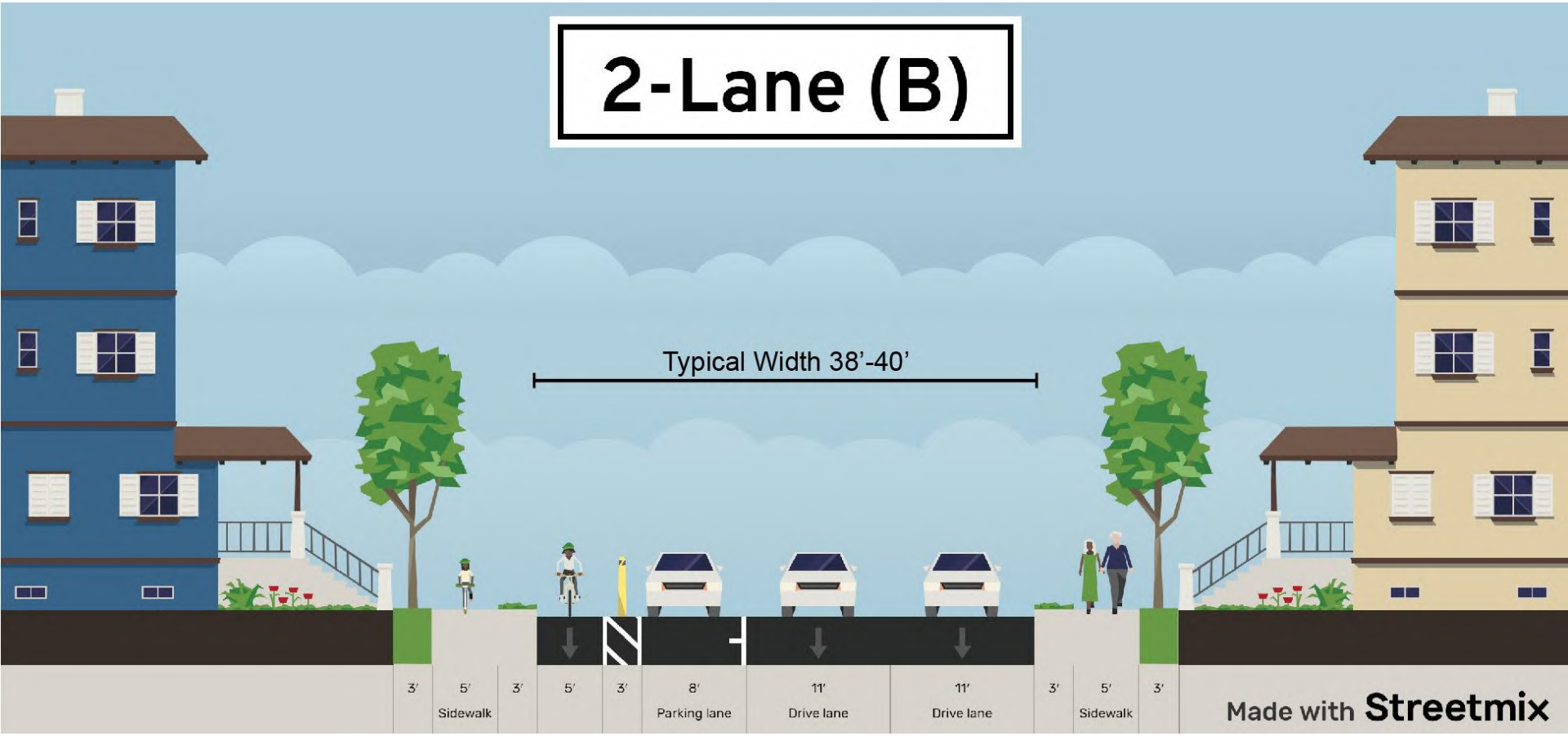


Two-way

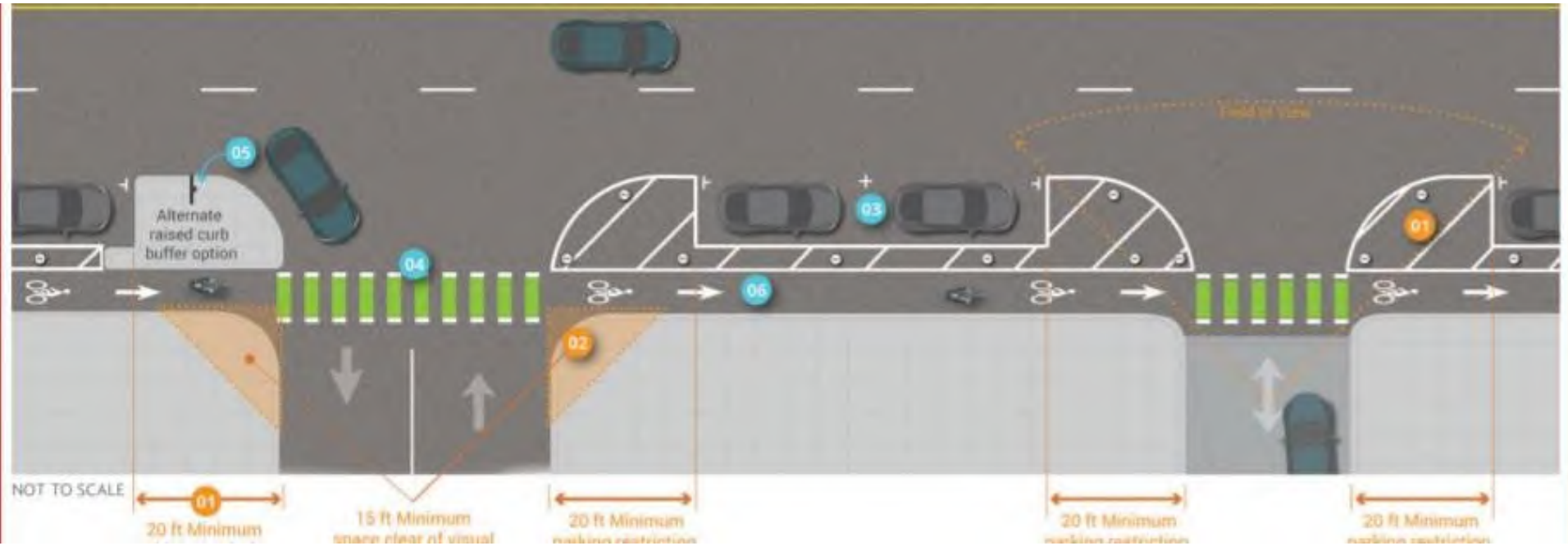
2-Lane


Typical Width 38’-40’
3’
5’
Sidewalk
3’
9’
Parking lane
6’
Bike lane
12’
Drive lane
12’
Drive lane
3’
5’
Sidewalk
3’
Made with Streetmix


2-Lane (A)
Typical Width 38’-40’
3’
5’
Sidewalk
3’
8’
Parking lane
6’
Bike lane
2’
11’
Drive lane
11’
Drive lane
3’
5’
Sidewalk
3’
Made with Streetmix

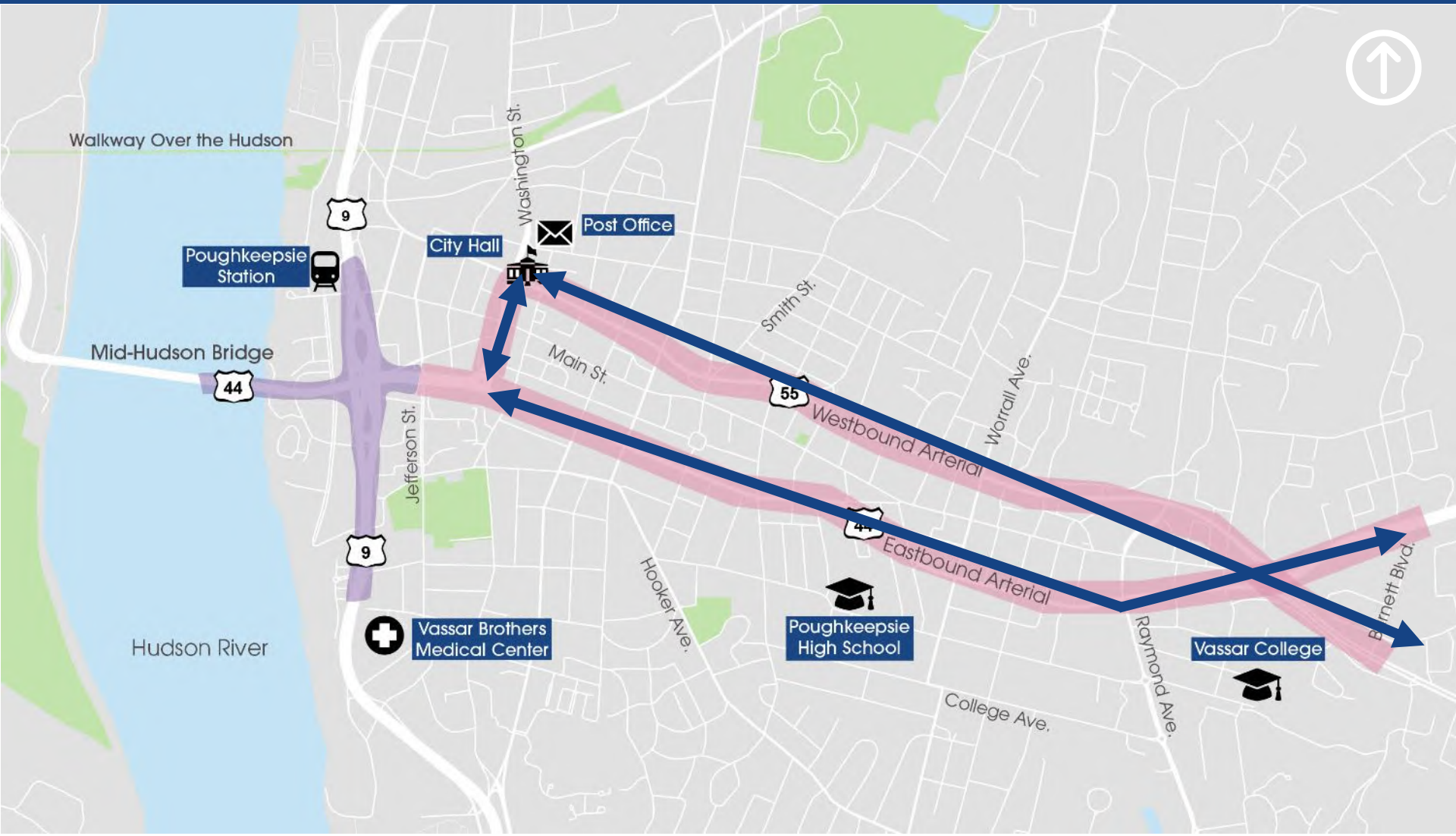

2-Lane (B)
Typical Width 38’-40’
3’
5’
Sidewalk
3’
5’
3’
8’
Parking lane
11’
Drive lane
11’
Drive lane
3’
5’
Sidewalk
3’
Made with Streetmix

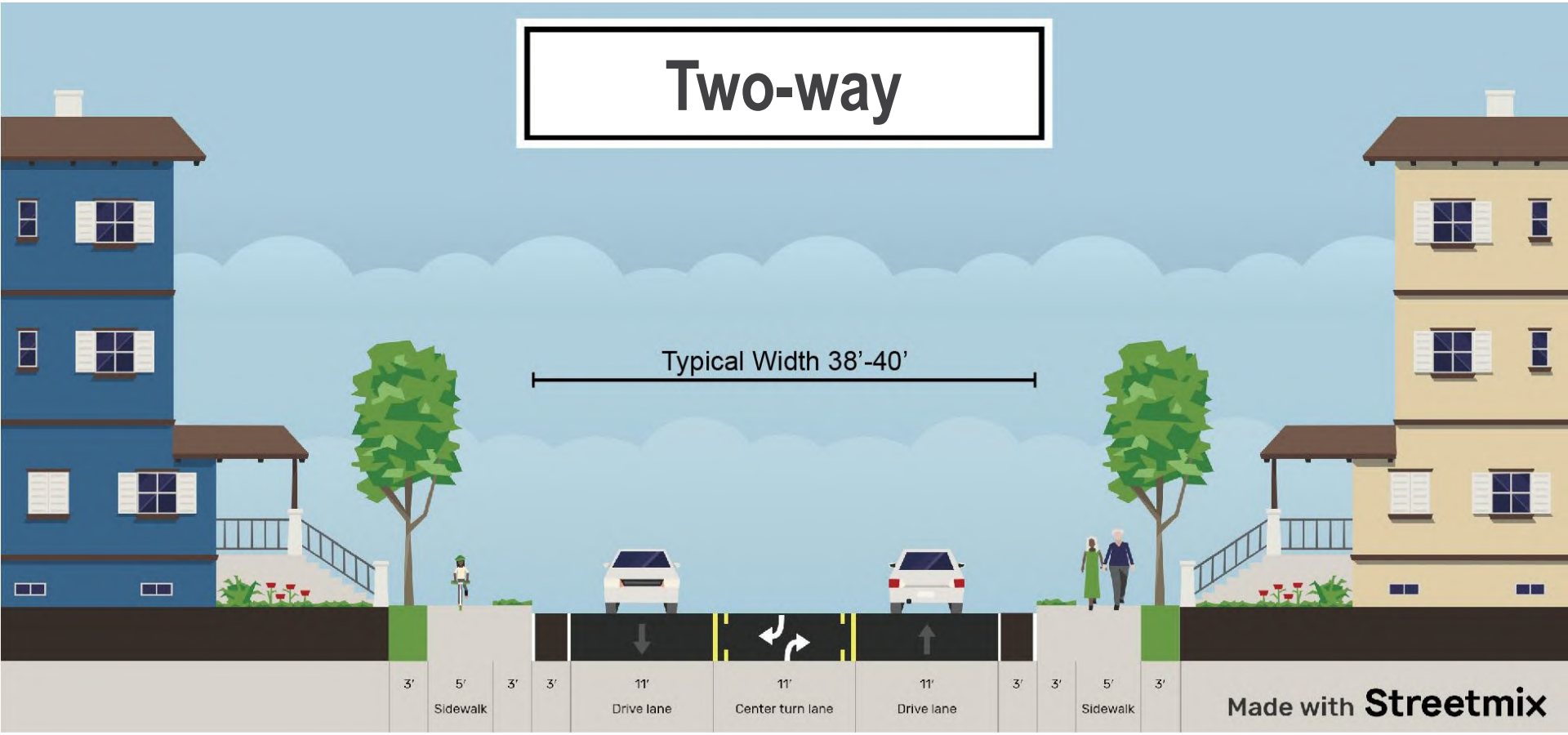
FHWA Separated Bike Lane Guide

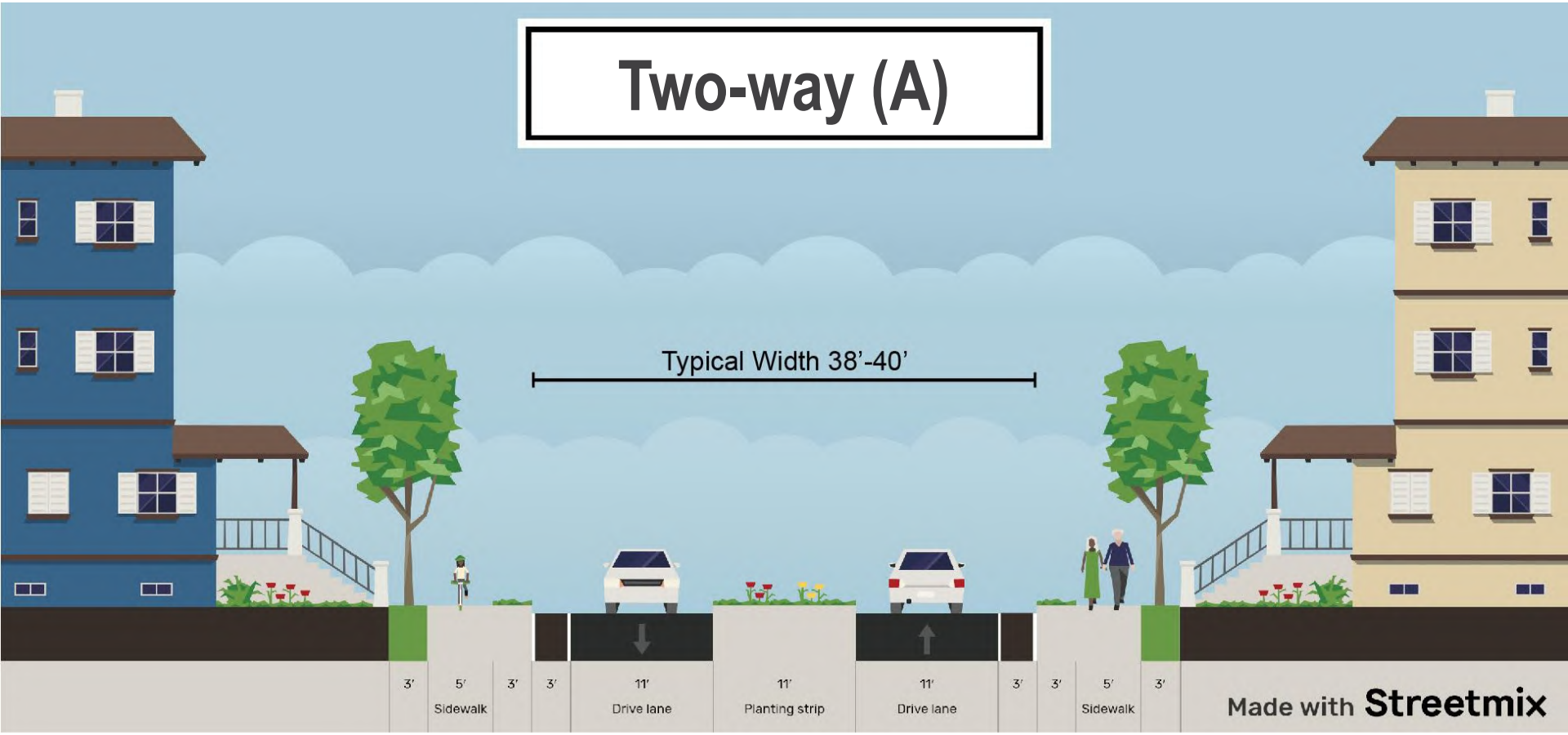


20’

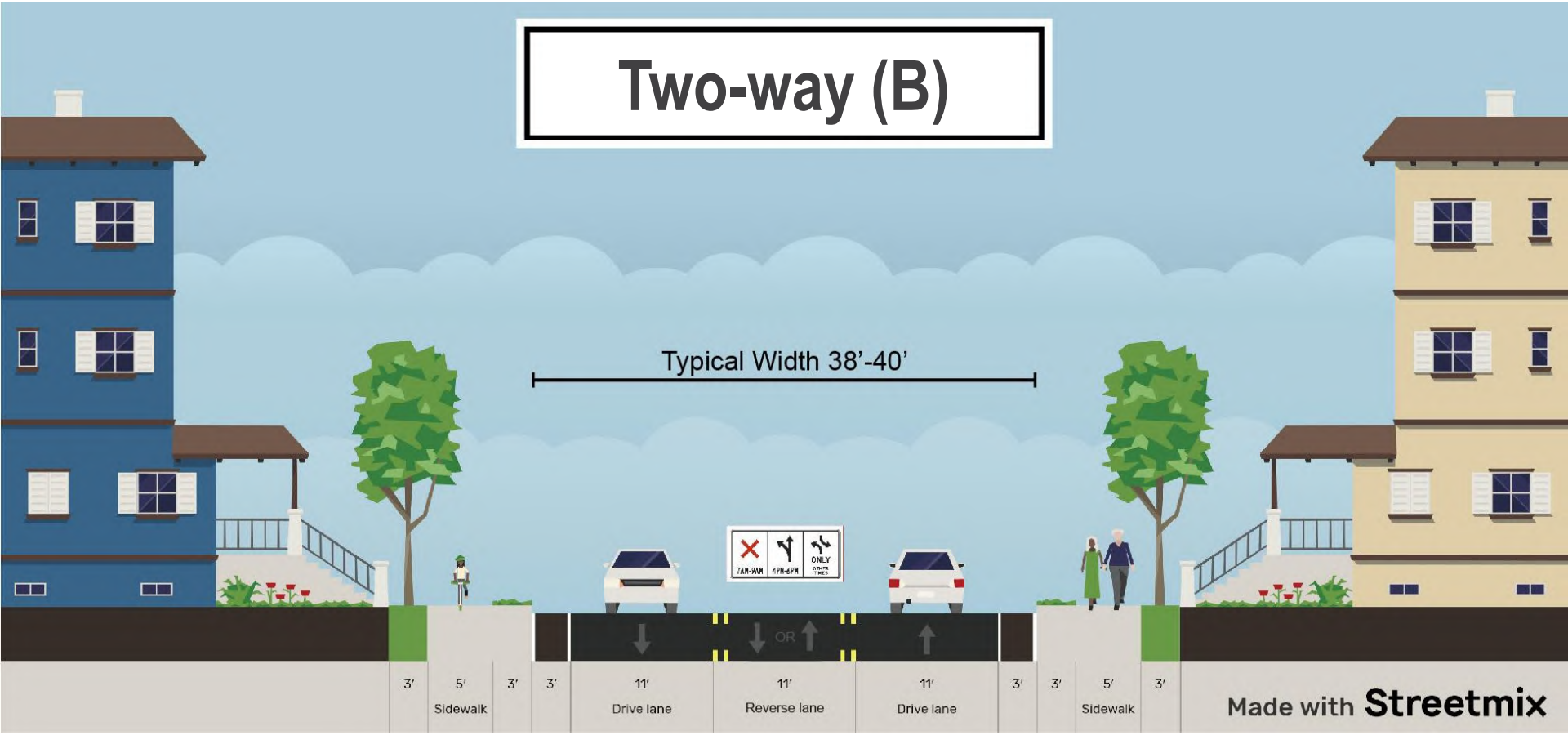
Two-way Concept




Two-way
Typical Width 38’-40’
3’
5’
Sidewalk
3’
3’
11’
Drive lane
11’
Center turn lane
11’
Drive lane
3’
3’
5’
Sidewalk
3’
Made with Streetmix

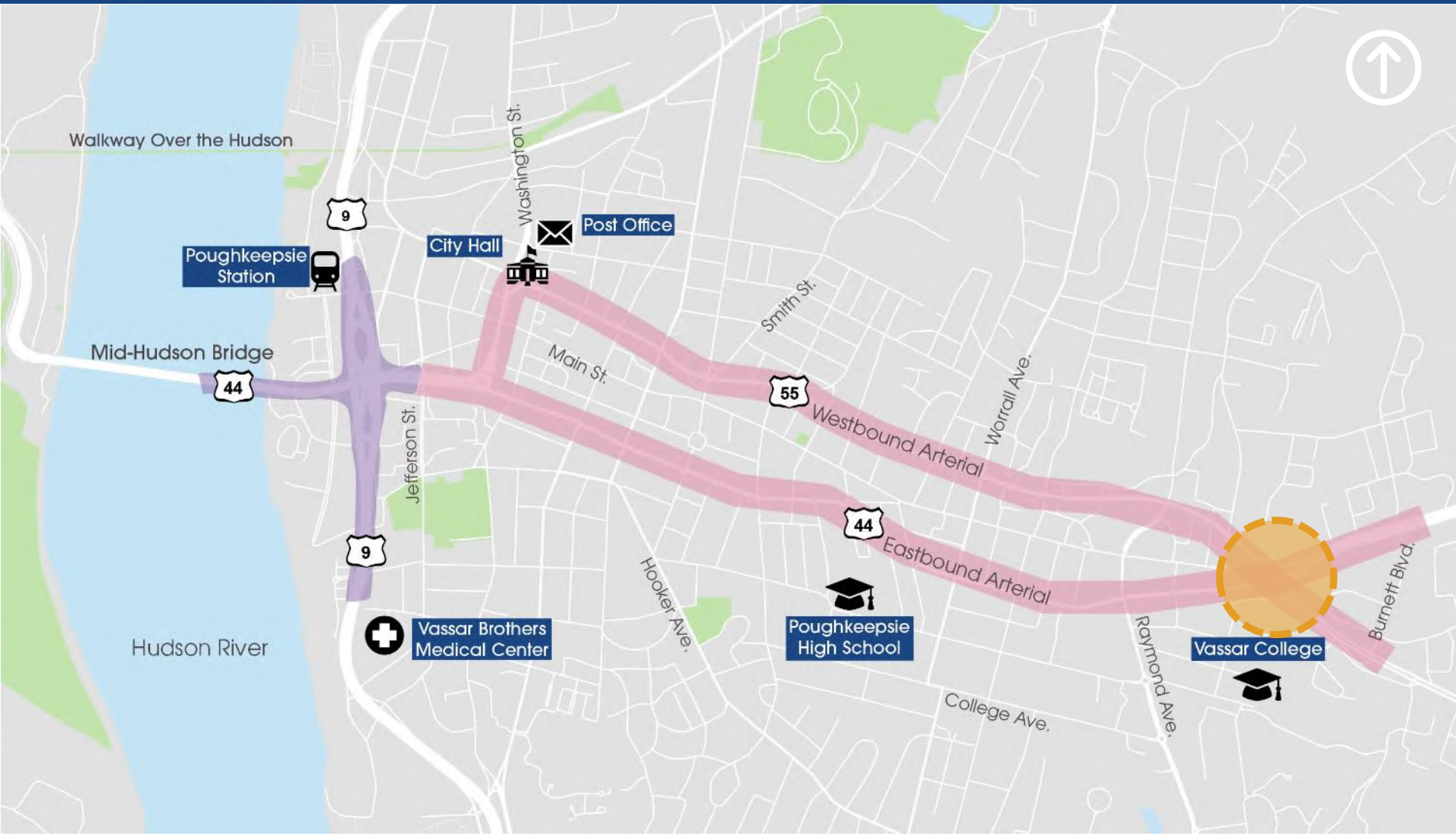

Two-way (A)
Typical Width 38’-40’
3’
5’
Sidewalk
3’
3’
11’
Drive lane
11’
Planting strip
11’
Drive lane
3’
3’
5’
Sidewalk
3’
Made with Streetmix

Reversible Center Lane



Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange

Untangle 44 / 55 interchange

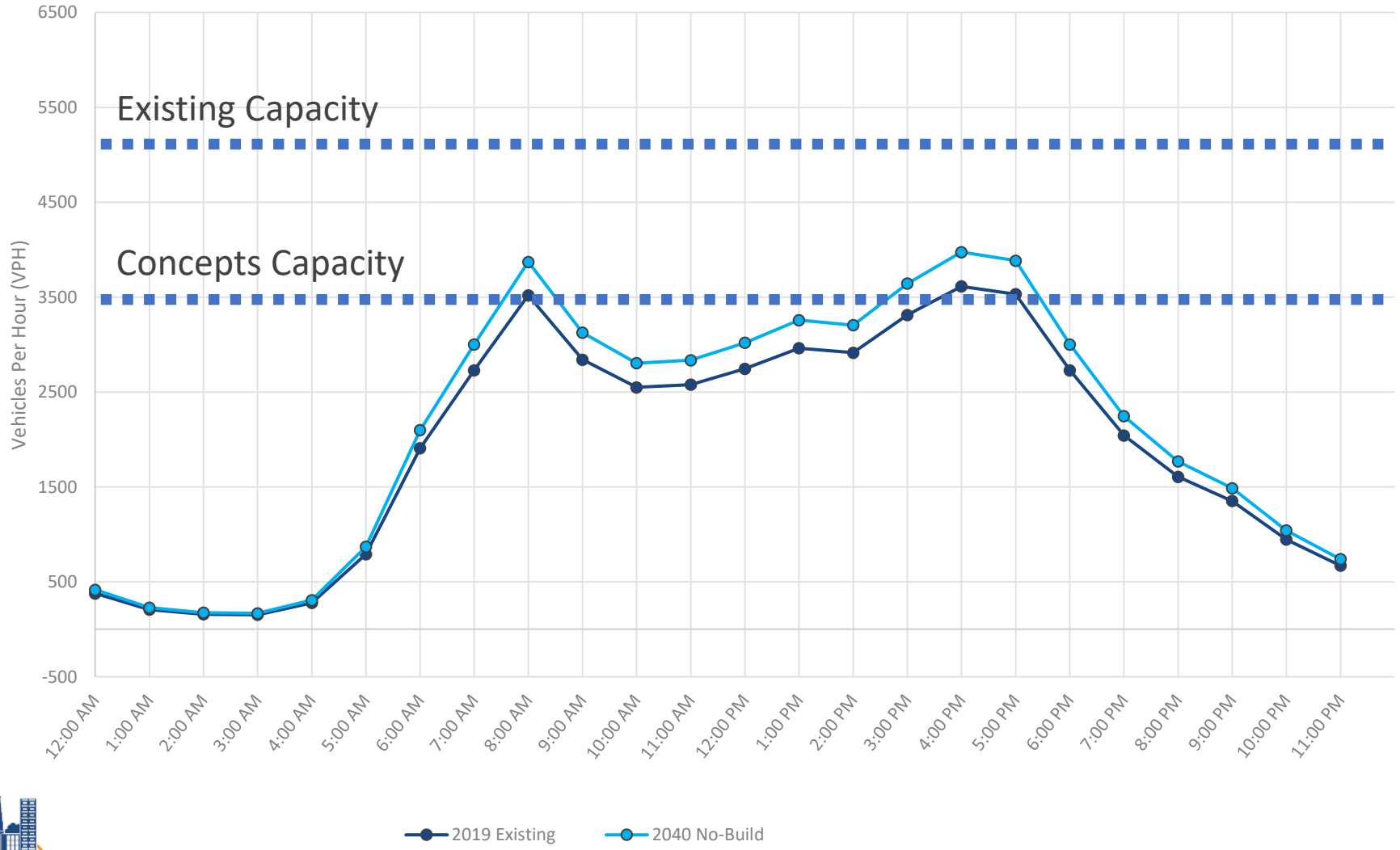


Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange

Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange

Traffic Operations

Theoretical Capacity Illustration



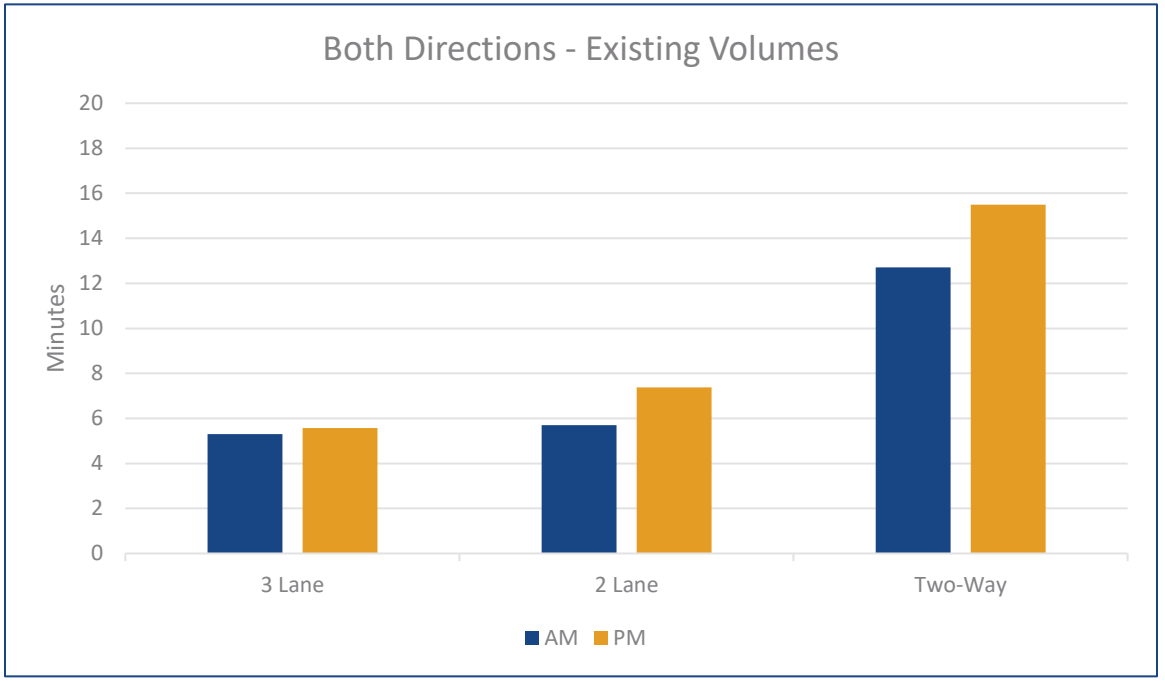
Route 9/44/55
Safety and Livability Study

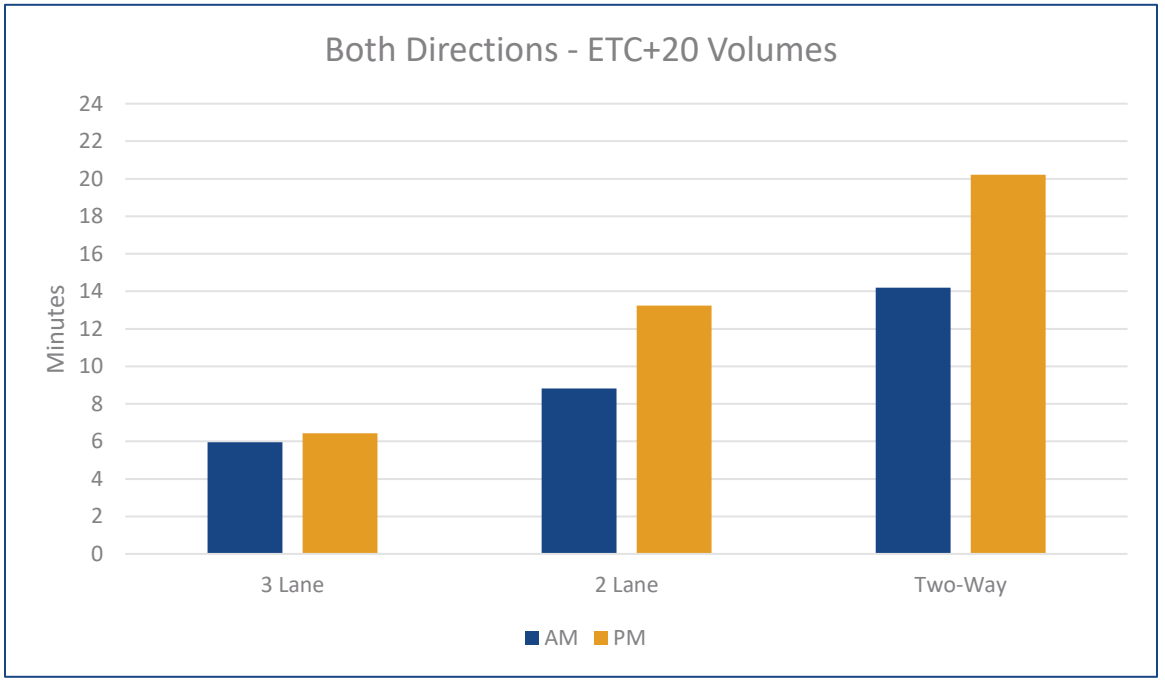
Diversions

Example Location	Lanes	ADT Before	ADT After	Notes
Ocean Park Boulevard, Santa Monica, CA	4 to 2	23,000	18,500 to 20,000	13% to 20% reduction in ADT 65% reduction in crashes Volumes on nearby Streets stable
Valencia Street, San Francisco, CA	4 to 2	22,000	20,000	10% reduction in ADT 2%-8% increase in ADT on 4 parallel Streets Crashes and injuries decreased
Routes 44/55 Poughkeepsie, NY	6 to 4	40,000		

Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange

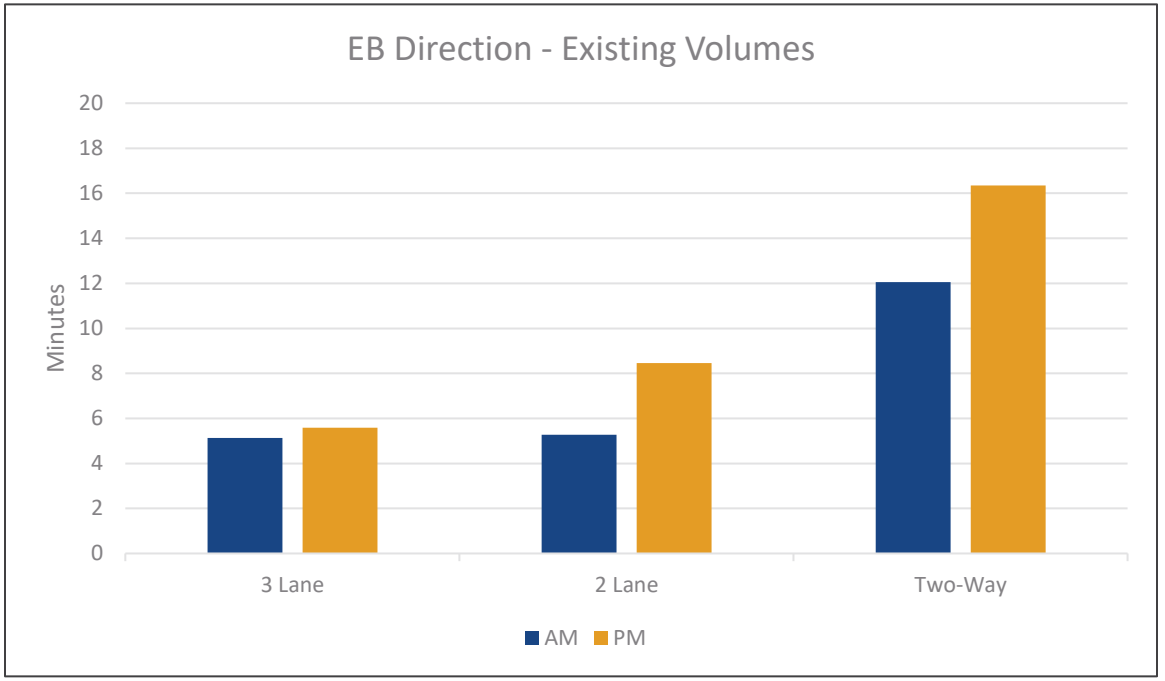
Travel Time
Average Both Directions

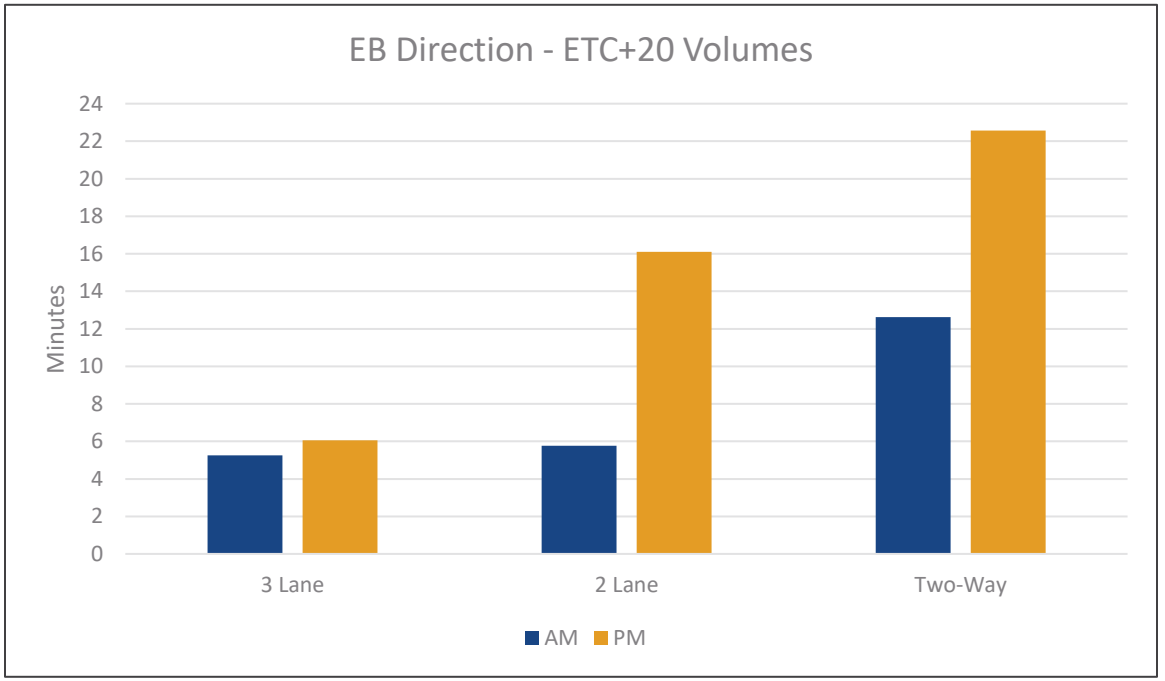




Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange

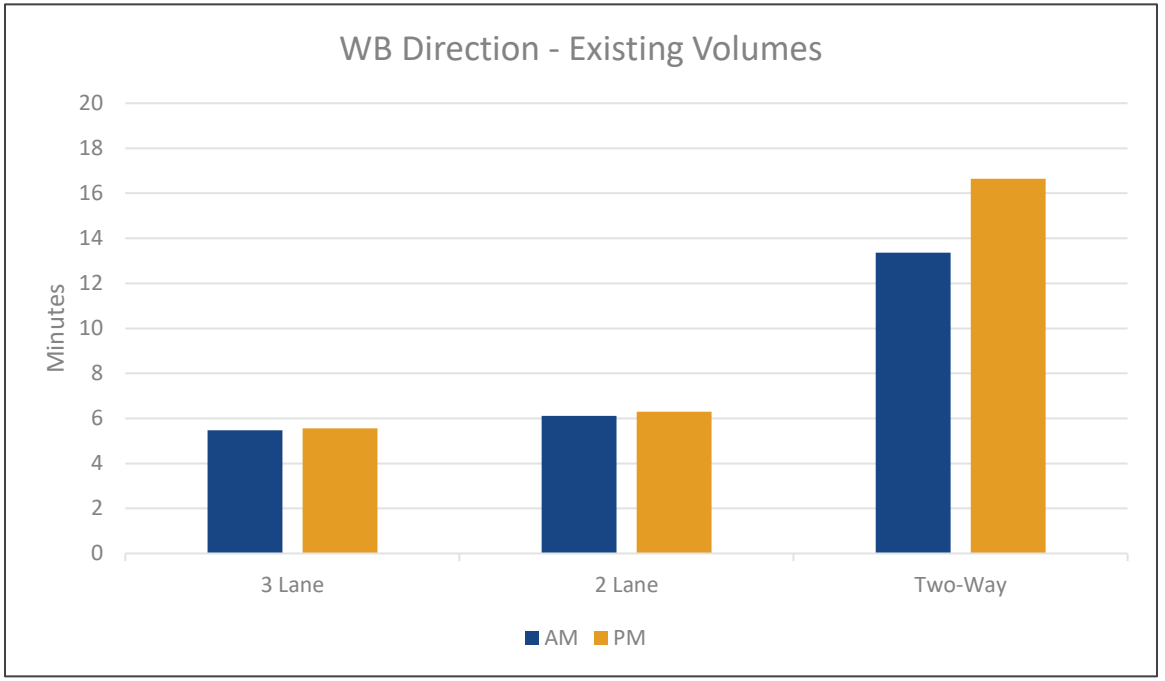
Travel Time
EB Direction

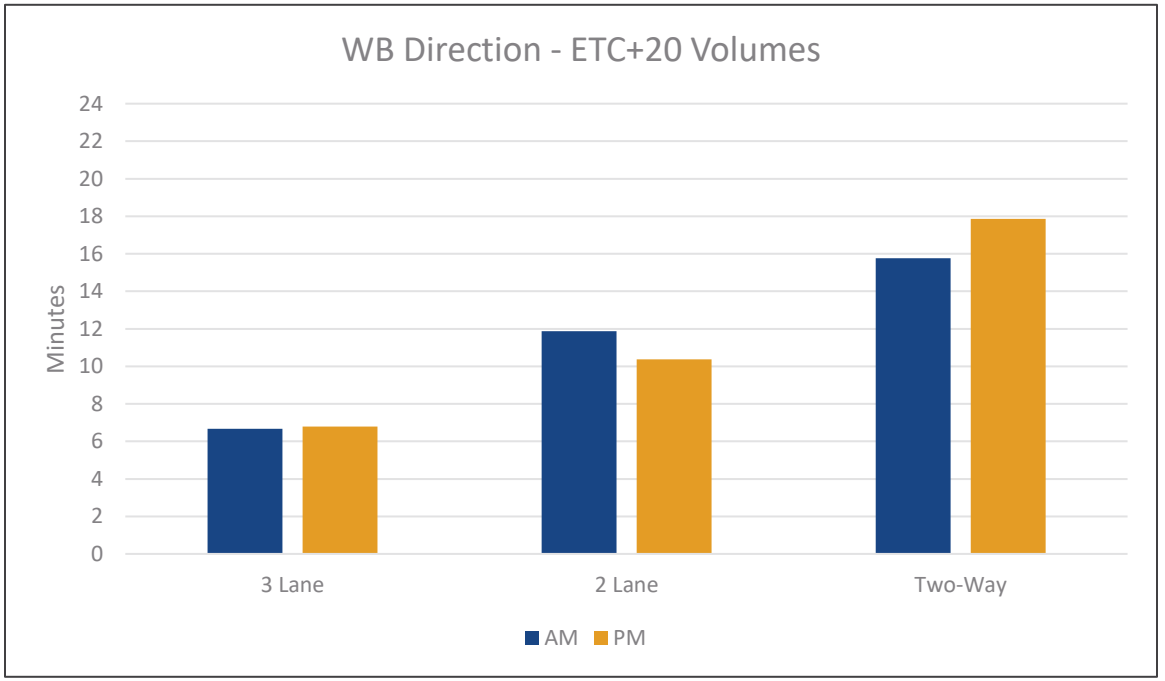




Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange

Travel Time
WB Direction

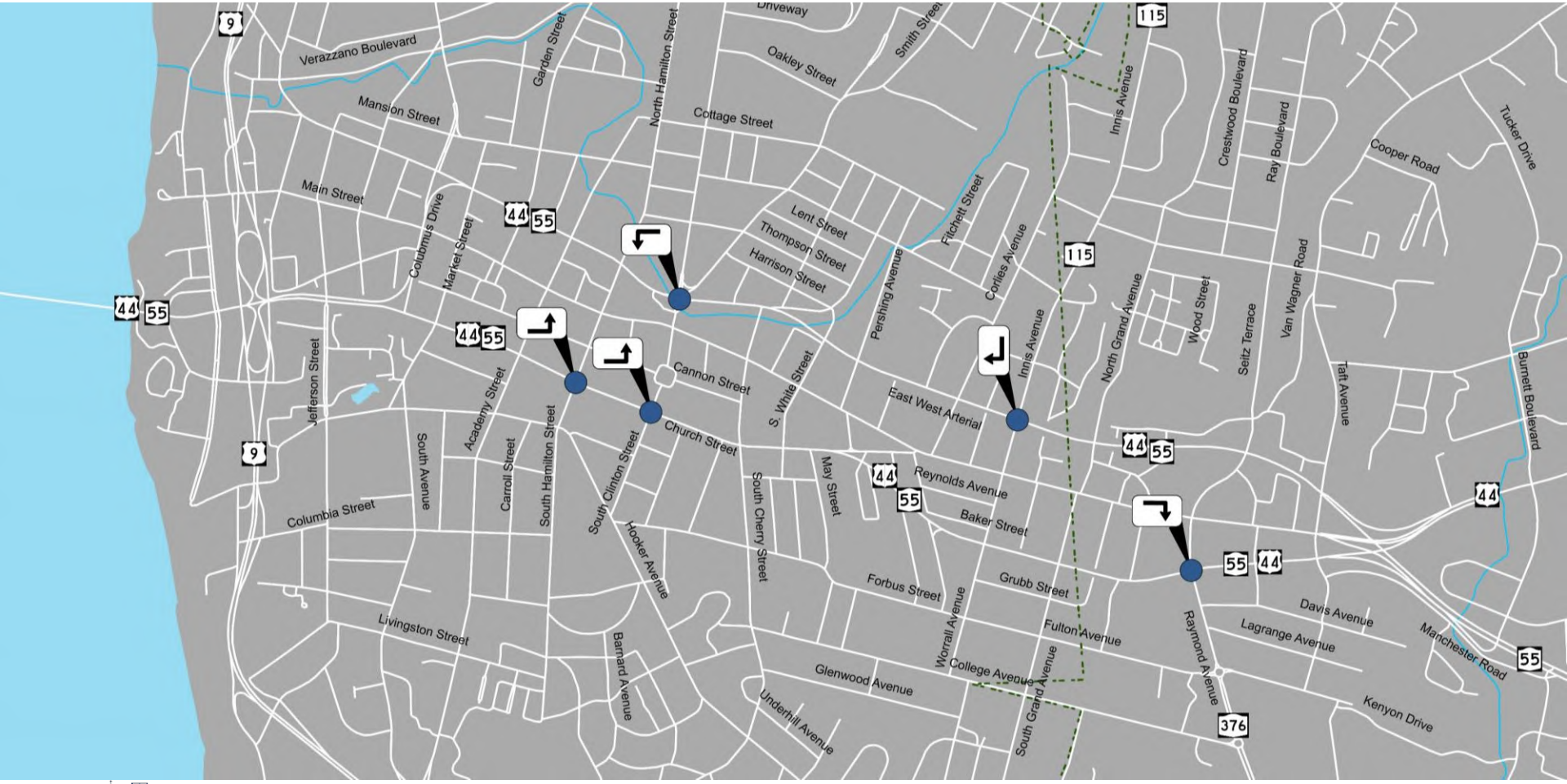




Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange

Spot Improvements

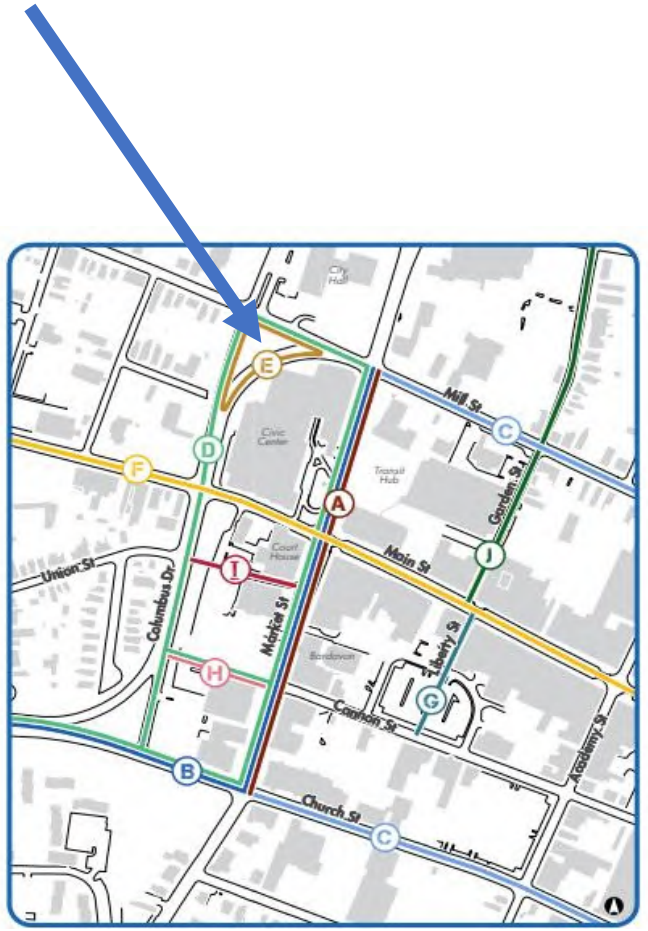
Spot Improvements



Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange

City Center Connectivity Project (2018)

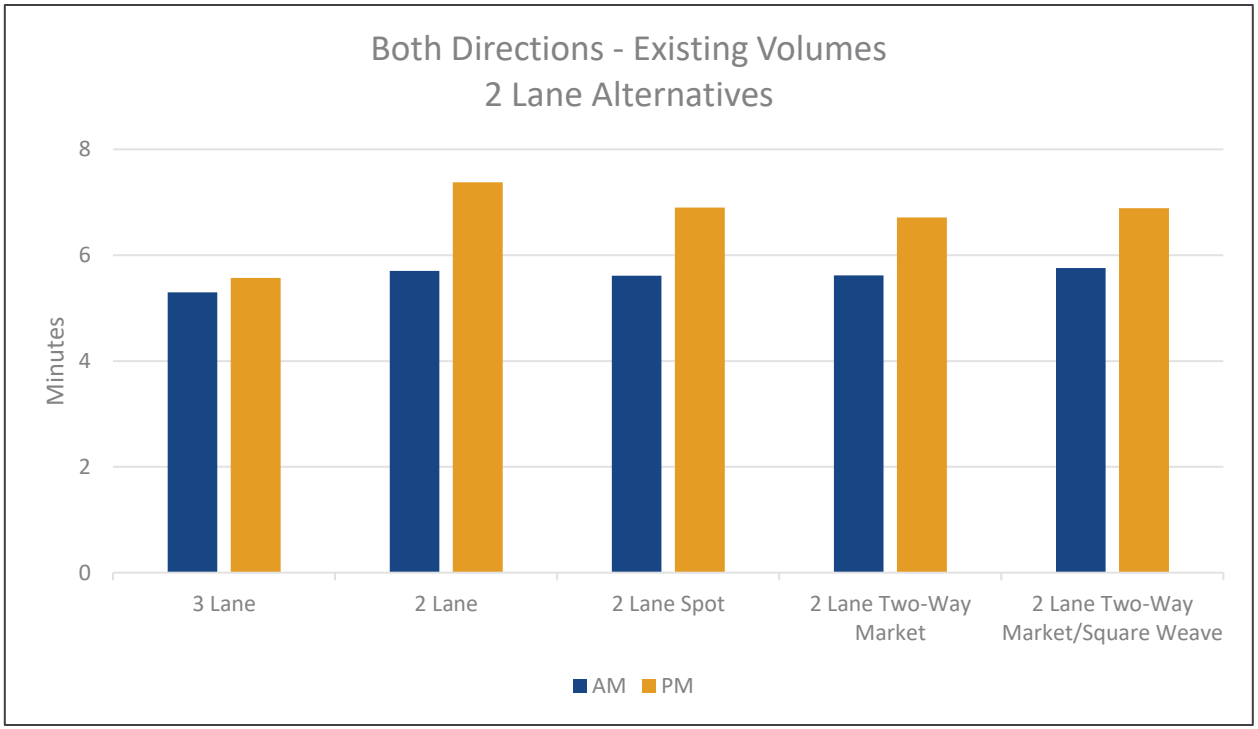
- "Square the weave"
  - Redesign Mill and Columbus as a right-angle intersection



Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange

Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange

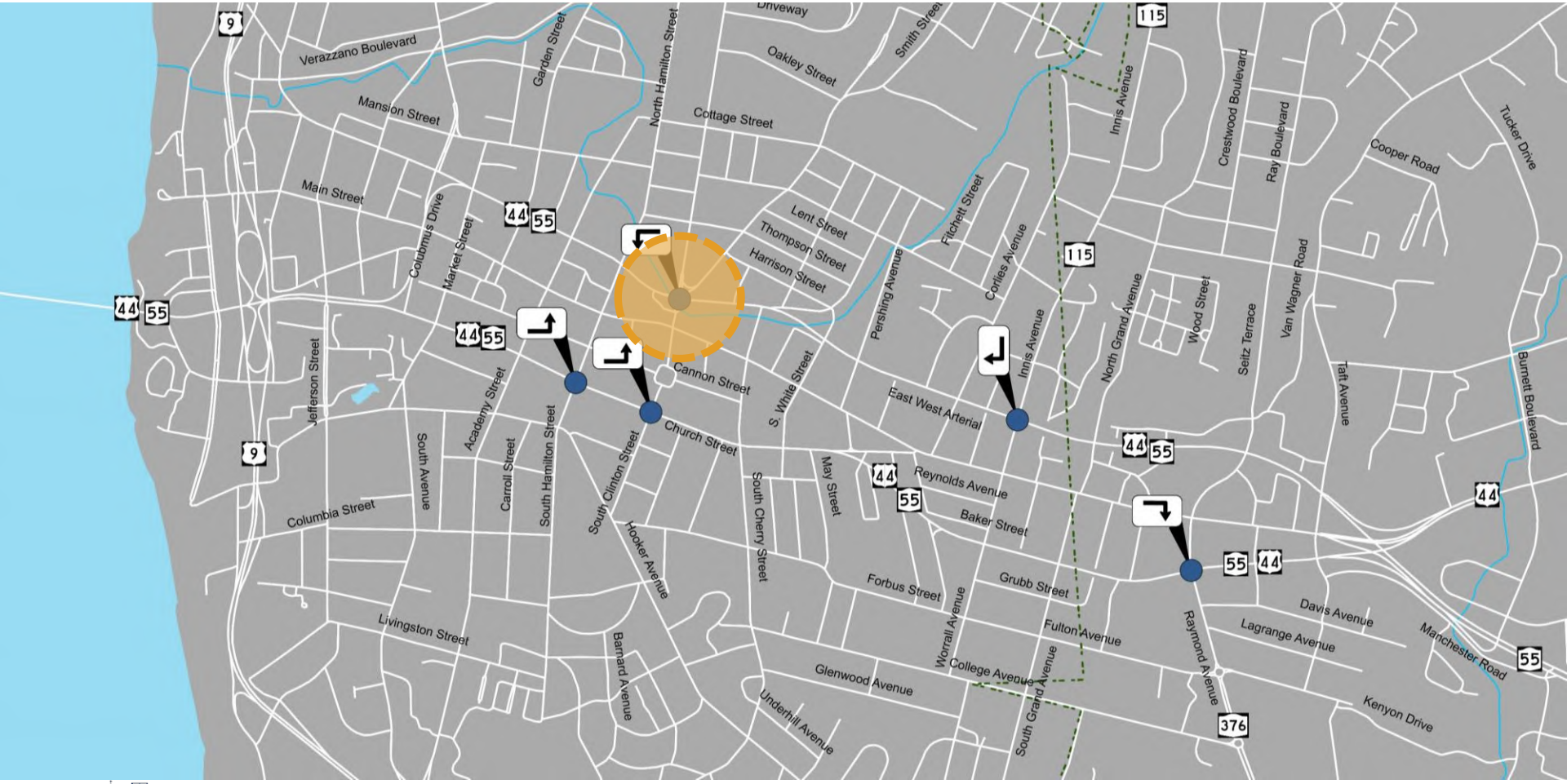
Travel Time
Average Both Directions



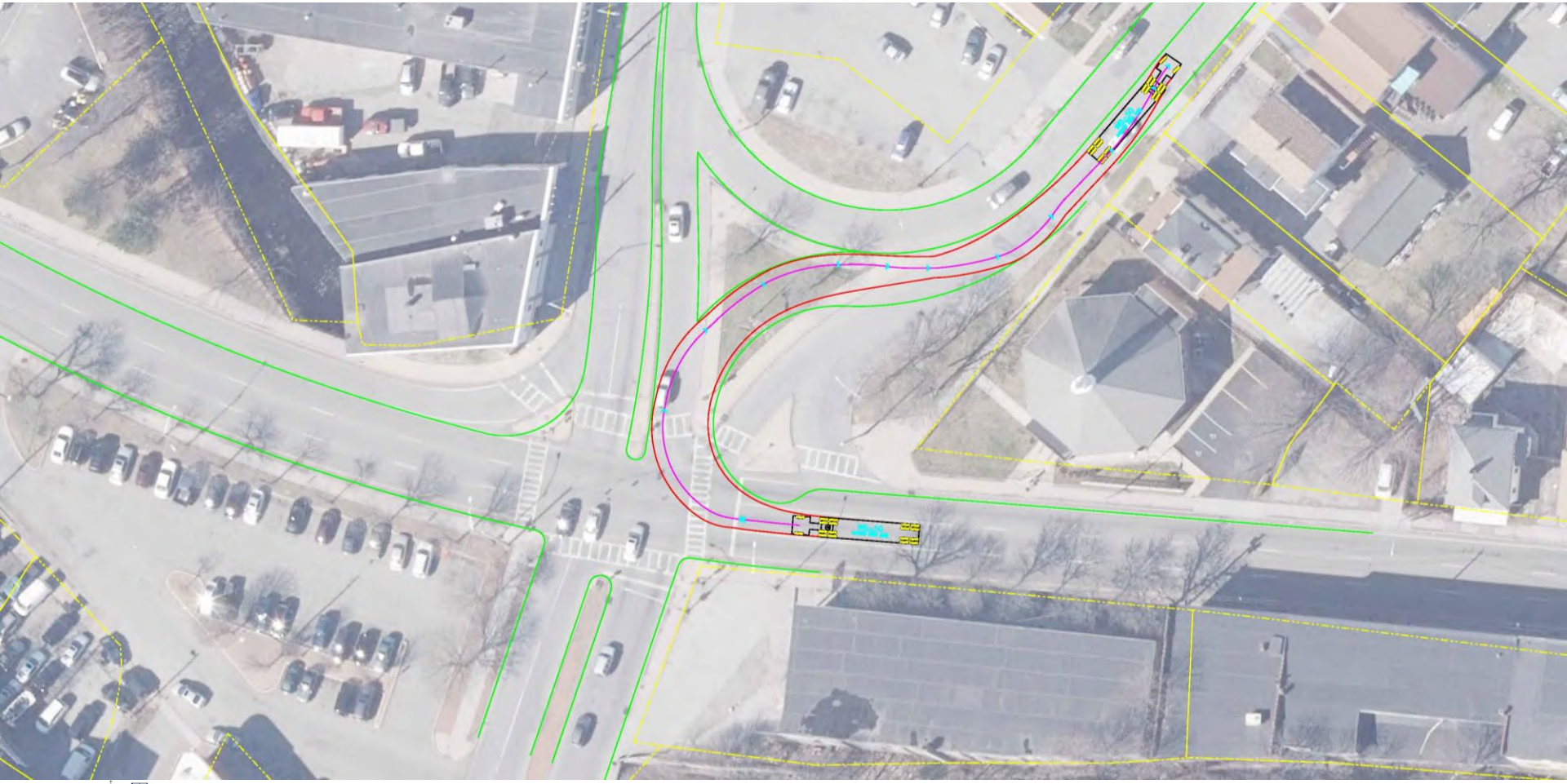
Travel Time Context

City	Street	Distance (mi)	Travel Time (min)	Overall Speed (mph)
Poughkeepsie	44/55 (Existing)	1.9	5:34	20
	44/55 (Two-Lane)	1.9	6:53	17
	44/55 (Two-Way)	1.9	15:30	7
Kingston	Broadway	1.2	6:00	12
Beacon	Main Street	1.6	5:15	10
Newburgh	Broadway	3.2	14:30	13
New Paltz	Main Street	1.4	6:15	13

Spot Improvements



Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange



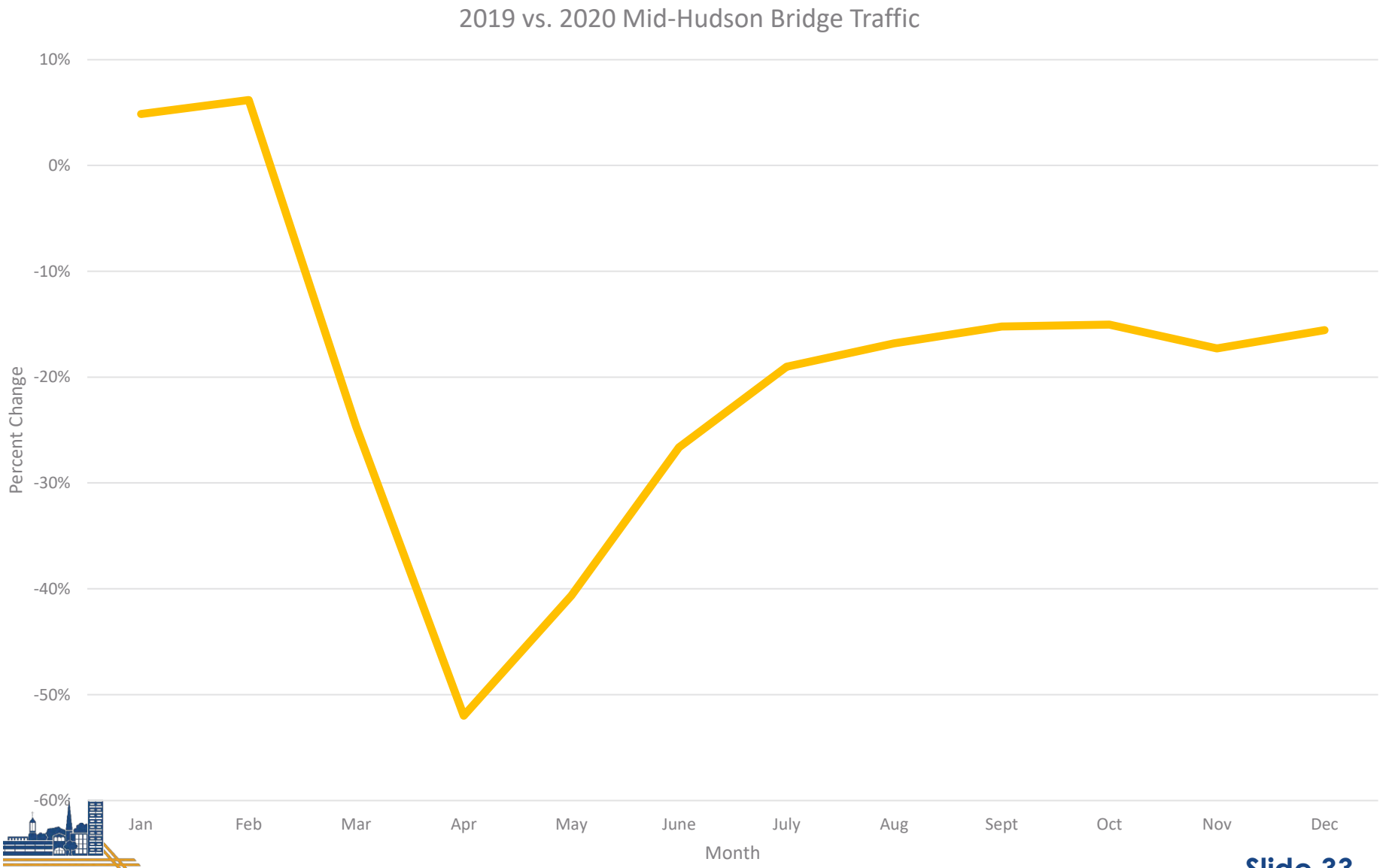
Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange

Simulations

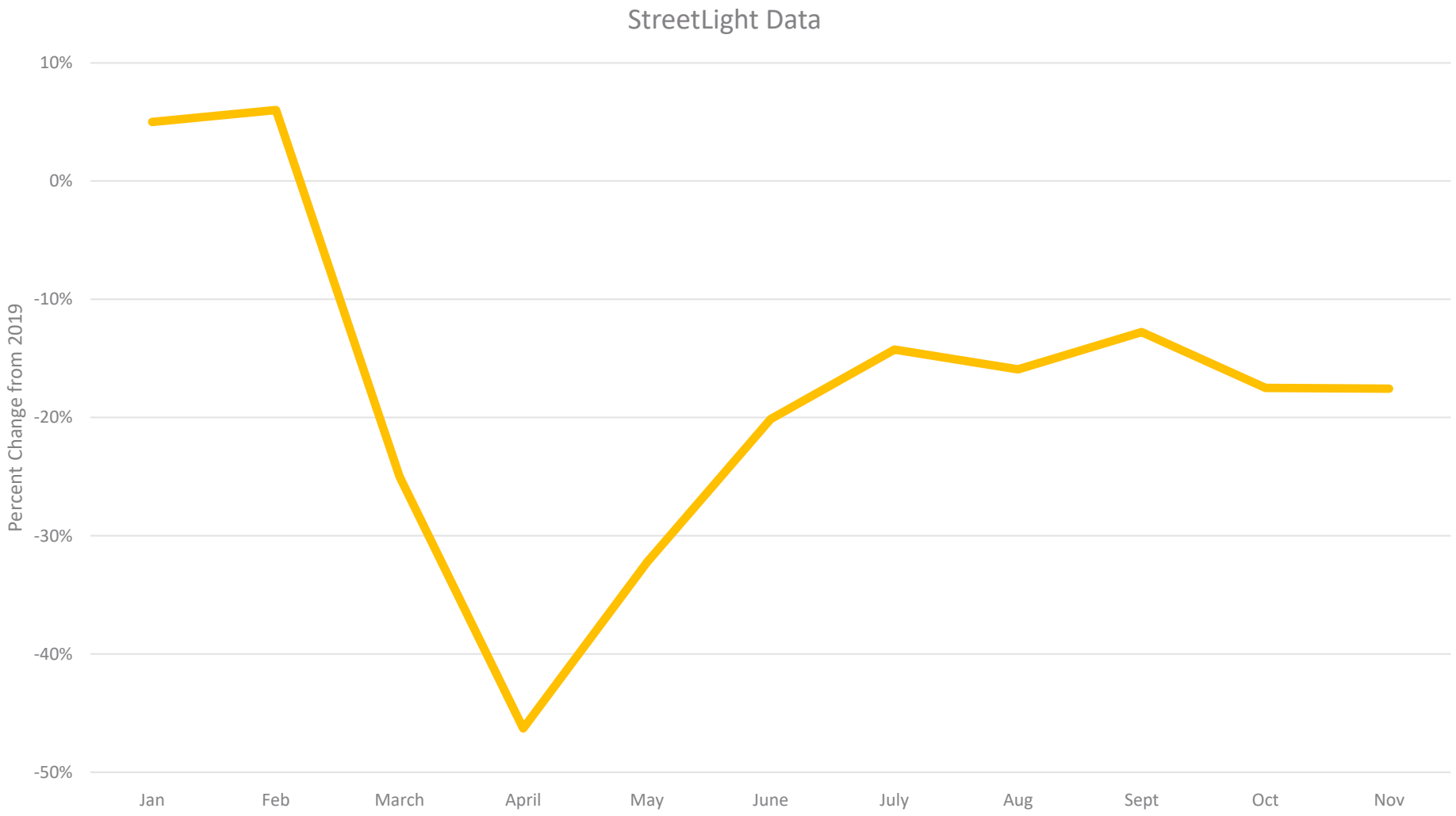
Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange

COVID-19 Travel Data

Travel Decrease Due to Covid-19



Travel Decrease Due to Covid-19

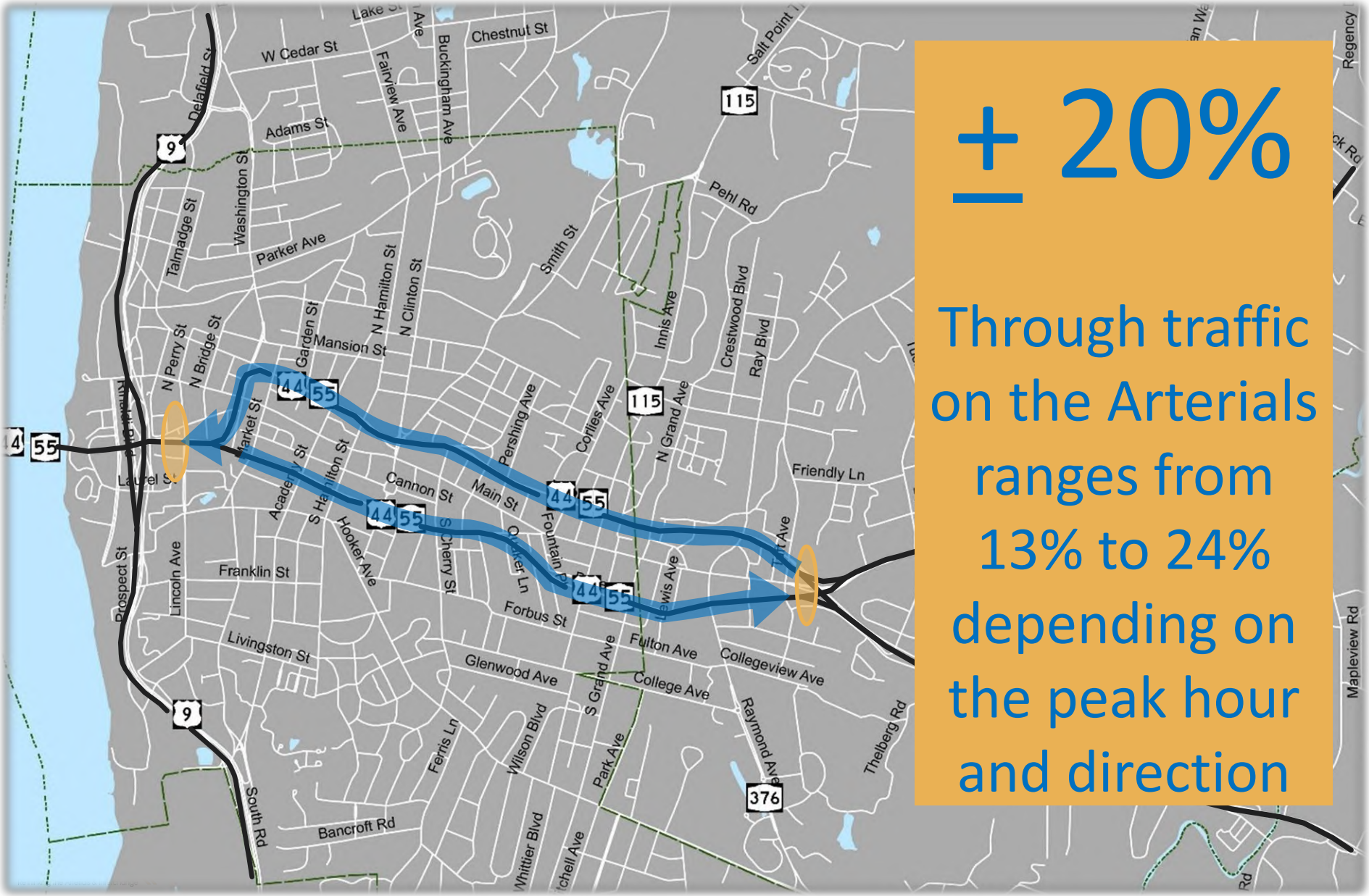


Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange

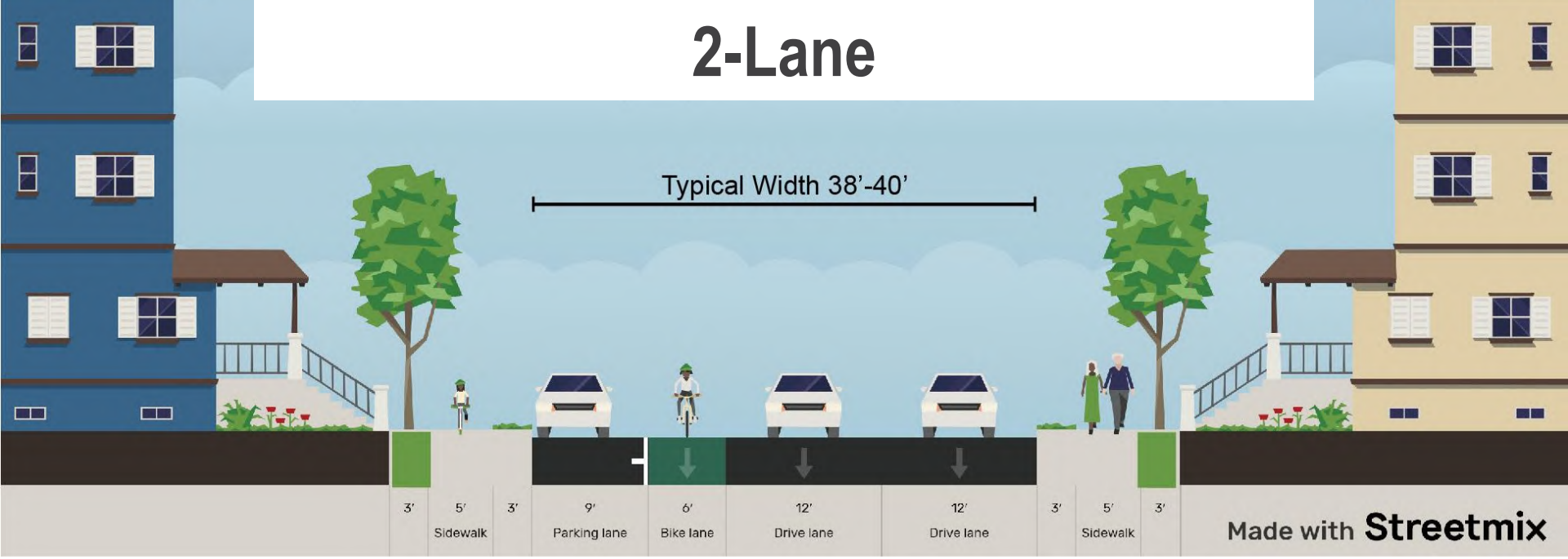
Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange

Trade-offs

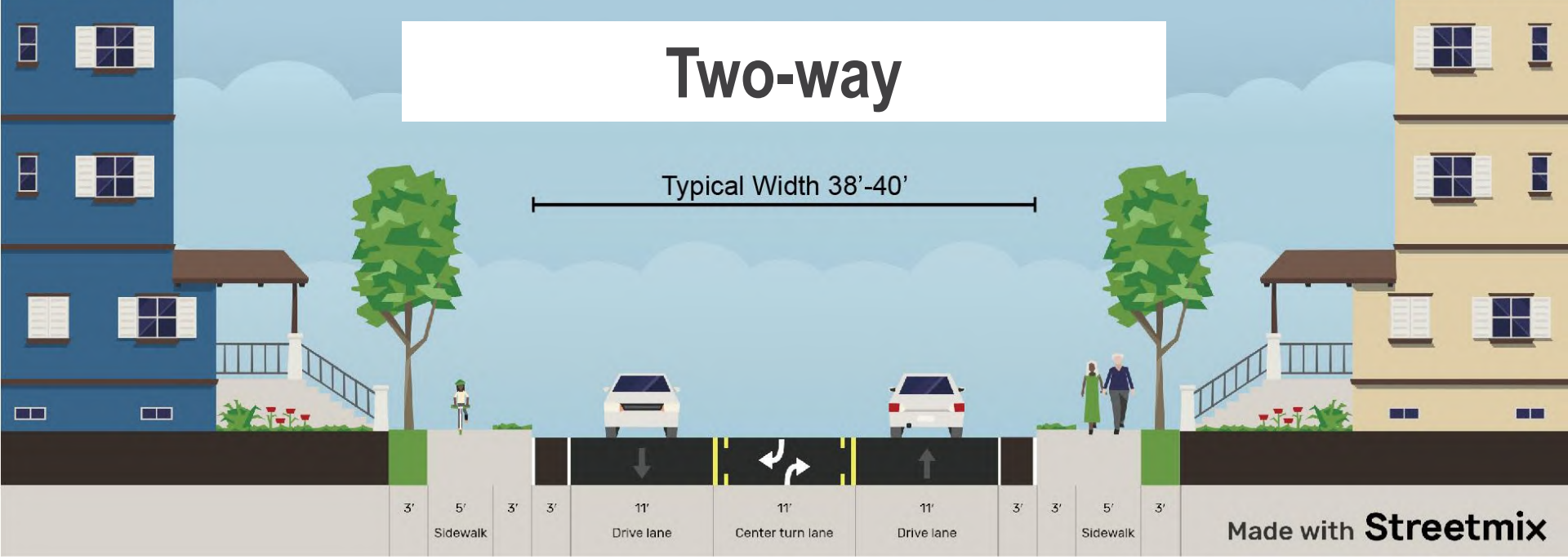
What percentage of traffic on the Arterials is through traffic?



2-Lane



- Pros
  - Good travel time
  - Good for amenities
    - Bikes, parking, transit, loading zones
  - Good for pedestrians
  - Lower cost
- Cons
  - Circulation (i.e. still one-way)



- Pros
  - Speed reductions
  - Local Circulation
- Cons
  - Travel time
  - Reduced opportunity for amenities
    - Bikes, parking, transit, loading zones

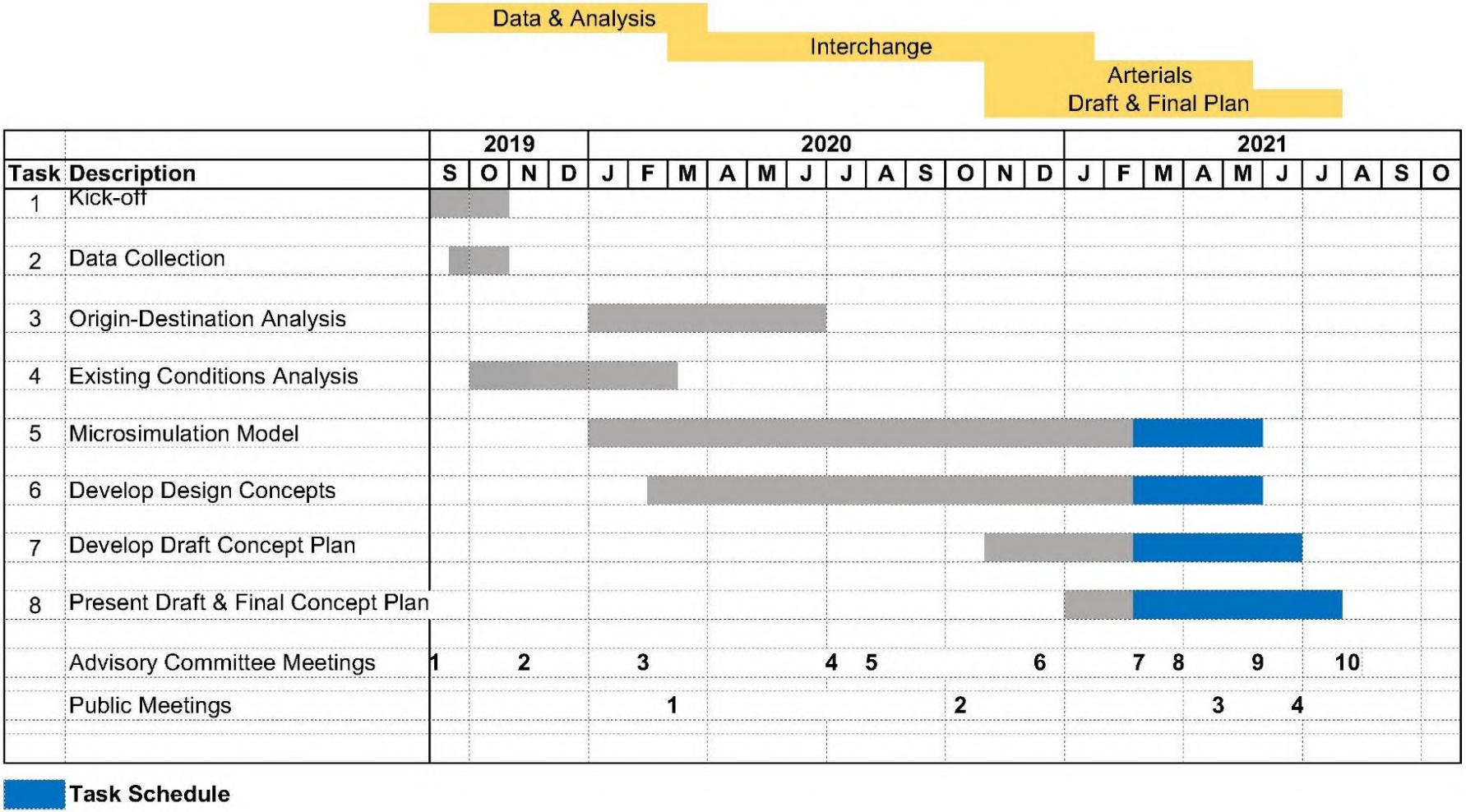
Preliminary Assessment

- If 10% growth, both concepts operate over capacity with travel times ~ 2 to 3 times existing.
- If volumes remain stable, both concepts operate near capacity
  - The 2-lane option provides reasonable travel times for through traffic
  - The 2-lane option provides opportunities for amenities (parking, bike lanes, bump-outs, shorter pedestrian crossings, loading zones)
- The 2-lane option costs less to construct

Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange

Schedule

Schedule



Poughkeepsie 9.44.55
Rethinking the Arterials & Interchange